

**Remarks**

Claim 1 has been amended, claim 2 is cancelled, claim 3 has been amended to change the dependency, claim 4 was previously cancelled, and claim 5 is unchanged, leaving only claims 1, 3 and 5 for the Examiner's further consideration.

Claims 1, 3 and 5 were rejected under 35 U.S.C. 112 as being inaccurate in the last four lines in claim 1. This rejection is believed to be overcome by the deletion of these lines.

Claims 1, 3 and 5 were rejected as anticipated by Lazzarotti (US 5,860,540) or Gretener (US 6,129,199).

Neither Lazzarotti nor Gretener discloses a characteristic feature of amended claim 1, that is, "when it is confirmed that articles are stored at a position in close proximity to a junction with the main conveyance path and a time-up period lapses, each auxiliary conveyance path reserves a detected spacing."

Likewise, neither Lazzarotti nor Gretener discloses a characteristic feature of amended claim 1, that is, "when the articles have been cut out, carrying articles into the auxiliary conveyance path is stopped for a given time."

In order to achieve the object of the present invention, that is, to decrease the chances of articles being successively cut out from only one auxiliary conveyance path to the main conveyance path, thus preventing articles from being unable to join from other auxiliary conveyance paths, the amended claim 1 is characterized in that "when it is confirmed that articles are stored at a position in close proximity to a junction with the main conveyance path and a time-up period lapses, each auxiliary conveyance path reserves a detected spacing, subsequently when this reserved spacing approaches the junction, the articles are cut out from the auxiliary conveyance path for joining to the spacing, and when the articles have been cut out, carrying articles into the auxiliary conveyance path is stopped for a given time."

According to the method of amended claim 1, the time period is controlled until each auxiliary conveyance path reserves the “detected spacing”, that is, until the cutting out of articles becomes possible. Accordingly, the method prevents articles from being successively cut out to the main conveyance path only from one auxiliary conveyance path, causing articles on other auxiliary conveyance paths to be unable to join. Thus, the invention of amended claim 1 is a significant improvement over the prior art.

Actual operations are illustrated in the attached sheet explaining the following:

a. In a case where all the articles stored on the auxiliary conveyance paths are cut out to the main conveyance path, with no articles remaining on the auxiliary conveyance paths, when the cutting out of the articles finishes, the carrying in of the following articles from the conveyance conveyor (12) to the auxiliary conveyance path (3) is stopped for a given time  $\alpha$ , and after the lapse of this given time (stopped time)  $\alpha$ , a leading article among those carried into the auxiliary conveyance path from the conveyance conveyor is conveyed to a position close to the junction with the main conveyance path (conveyance time  $\beta$ ). When the leading sensor (14) confirms that articles are stored at the position close to the junction, a timer is activated and when the time of the timer is up (timer time  $\gamma$ ), the detected spacing can be reserved.

Thus, until the cutting out of the following article becomes possible, stopped time  $\alpha + \text{conveyance time } \beta + \text{timer } \gamma$  is required, whereby the other auxiliary conveyance paths can reserve the “detected spacing” during this time period ( $\alpha + \beta + \gamma$ ), thereby preventing the situation in which articles cannot join the main conveyance path from the other auxiliary conveyance paths.

b. In a case where not all the articles stored on the auxiliary conveyance paths are cut out to the main conveyance path, with some articles remaining on the auxiliary conveyance paths, when the cutting out of the articles is finished, the

remaining articles have been conveyed to the point close to the junction with the main conveyance path 2. Almost simultaneously with the finishing of the cutting out, the leading sensor 14 confirms that the articles have been stored at the position close to the junction and the timer is activated. When the time-up lapses (timer time  $\gamma$ ), the detected spacing can be reserved.

Thus, the timer time  $\gamma$  is required until the cutting out of the following articles becomes possible. By this, at least during the timer time  $\gamma$ , the other auxiliary conveyance paths can reserve the "detected spacing", thereby preventing the situation in which articles on the other auxiliary conveyance paths cannot join the main conveyance path.

Claims 3 and 5 depend from claim 1 and are believed to be allowable along with claim 1 and also because of the added limitations recited therein.

The Commissioner is hereby authorized to charge any deficiencies, or credit any overpayments associated with this communication to our Deposit Account No. 50-0852.

This application is now believed to be allowable and such action is respectfully requested.


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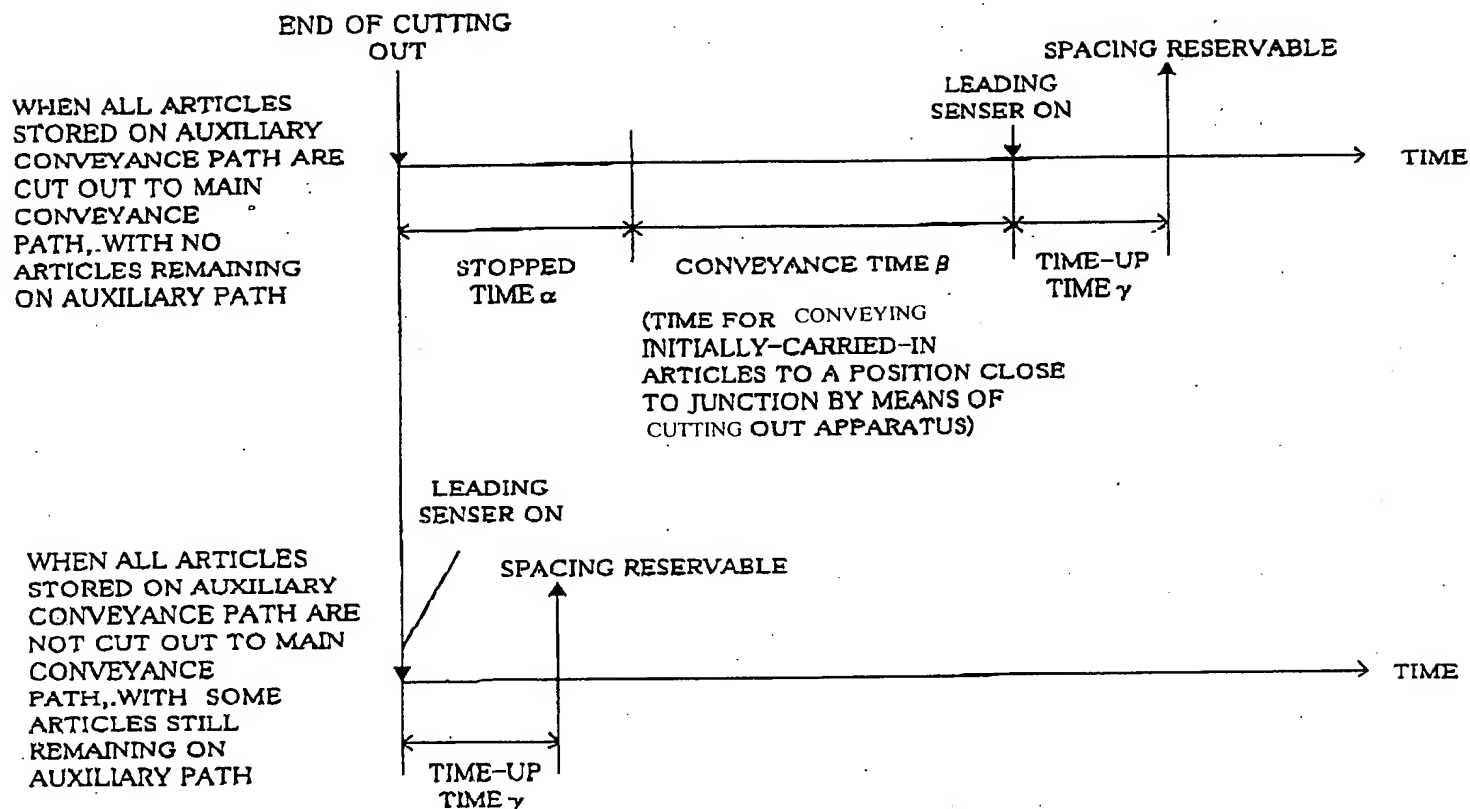
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on January 27, 2004.

  
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Respectfully submitted,

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FEB 04 2004

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